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10/574,287	03/31/2006	Alain Bouvier	288319US2PCT	5514

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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DOUGHERTY, SEAN PATRICK

ART UNIT	PAPER NUMBER
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3736

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/574,287	<b>Applicant(s)</b> BOUVIER ET AL.	
	<b>Examiner</b> SEAN P. DOUGHERTY	<b>Art Unit</b> 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This is the *final* Office action based on the final application filed March 31, 2006. Examiner acknowledges amended claims 12, 15-17 and 20. Claims 12-23, as filed, are currently pending and have been considered below.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 12, 14-16, 18 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-2003-337930, in view of Vock et al. (US Publication No. 2007/0111753), herein referred to as Vock.**

**Regarding claims 12, 14 and 23**, JP-2003-337930 discloses a stride monitoring device, comprising:

a first shoe including at least a permanent magnetic mass (magnet [1]);

a second shoe including at least one magnetometer for measuring a magnetic field produced by the magnetic mass in the first shoe and for outputting magnetic field signals based on the measured magnetic field produced by the magnetic mass in the first shoe, wherein said magnetic field signals can be processed to determine stride parameters (magnetometric sensor [2]).

DiBenedetto does not appear to disclose a stride monitoring device wherein a second shoe further comprises at least one accelerometer for measuring an acceleration and for outputting acceleration signals based on the measured acceleration.

However, Vock, a reference in analogous art, teaches a second shoe further comprises at least one accelerometer for measuring an acceleration and for outputting acceleration signals based on the measured acceleration [524].

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of JP-2003-337930 and Vock before him or her to modify the second shoe of JP-2003-337930 to include the at least one accelerometer of Vock.

The motivation for doing so would have been to detect the forward acceleration and speed of a user using the accelerometer located on a shoe (Vock: ¶0302).

**Regarding claims 15 and 16**, JP-2003-337930 discloses the magnetometer and Vock teaches the accelerometer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the assembly of JP-2003-344094 in view of Vock to have a plurality of magnetometers and accelerometers, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

**Regarding claim 18**, JP-2003-337930 discloses a device according to claim 17, further comprising portable means for receiving the signal transmitted by the transmission means and for displaying data representative of the signal (display means [5]).

**Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP-2003-337930, as applied to claim 12 above, in view of DiBenedetto et al. (US Patent No. 7,188,439), herein referred to as DiBenedetto.**

**Regarding claim 13**, JP-2003-337930 does not appear to disclose wherein each of the first and second shoes includes at least one magnetic mass, measurement means for making at least one physical measurement, and electronic means for

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processing the physical measurements, the measurement means including at least one accelerometer and at least one magnetometers capable of outputting signals that can be processed to determine stride parameters.

However, DiBenedetto, a reference in analogous art teaches wherein each of the first and second shoes includes (col. 5, lines 55-58) at least one magnetic mass [123], measurement means for making at least one physical measurement [122], and electronic means for processing the physical measurements (electrical circuitry; see Fig. 9-14), the measurement means including at least one magnetometers [122] capable of outputting signals that can be processed to determine stride parameters. Vock teaches measurement means including at least one accelerometer [524] capable outputting signals that can be processed to determine stride parameters.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of JP-2003-337930 and DiBenedetto before him or her to modify the shoes of JP-2003-337930 of each include the magnetic mass, magnetometer and electronic means of DiBenedetto. The motivation for doing so would have been to provide the devices of JP-2003-337930 each together on a single shoe and to "measure a magnetic field generated by the magnet ... and convert[ing] the magnetic field measurement into a distance measurement" (DiBenedetto: col. 4, lines 27-29).

**Claims 12-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiBenedetto et al. (US Patent No. 7,188,439), herein referred to as DiBenedetto, in view of Vock et al. (US Publication No. 2007/0111753), herein referred to as Vock.**

**Regarding claims 12, 14, 17 and 23,** DiBenedetto discloses a stride monitoring device, comprising:

a first shoe including at least a permanent magnetic mass [123];

a second shoe including at least one magnetometer for measuring a magnetic field produced by the magnetic mass in the first shoe and for outputting magnetic field signals based on the measured magnetic field produced by the magnetic mass in the first shoe [122], wherein said magnetic field signals can be produced to determine stride parameters; wherein

the second shoe comprises electronic means for processing said magnetic field signals (electrical circuitry; see Fig. 9-14), wherein said electronic means comprises means for transmitting a signal output by the electronic means (col. 10, lines 50-61).

Examiner notes the at least one magnetometer of the second shoe is capable of measuring the magnetic field produced by the magnetic mass of the first shoe, the magnetic fields capable of being produced to determine stride parameters.

DiBenedetto does not appear to disclose a stride monitoring device wherein the second shoe further comprises at least one accelerometer for measuring an

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acceleration and for outputting acceleration signals based on the measured acceleration; wherein

the second shoe comprises electronic means for processing said acceleration signals, wherein said electronic means comprises means for transmitting a signal output by the electronic means.

However, Vock, a reference in analogous art, teaches wherein the second shoe further comprises at least one accelerometer for measuring an acceleration and for outputting acceleration signals based on the measured acceleration [524] ; wherein

the second shoe comprises electronic means for processing said acceleration signals, wherein said electronic means comprises means for transmitting a signal output by the electronic means (“MMD 524 wirelessly transmits speed as wireless data 527 to wrist instrument 526”; ¶0302).

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of DiBenedetto and Vock before him or her to modify the second shoe and electronic means of DiBenedetto to include the at least one accelerometer and electronic means of Vock. The motivation for doing so would have been to detect the forward acceleration and speed of a user using the accelerometer located on a shoe (Vock: ¶0302).



**Regarding claim 13**, DiBenedetto discloses a device according to claim 12 wherein each of the first and second shoes includes (col. 5, lines 55-58) at least one magnetic mass [123], measurement means for making at least one physical measurement [122], and electronic means for processing the physical measurement (electrical circuitry; see Fig. 9-14), the measurement means including at least one magnetometer [122] capable of outputting signals that can be processed to determine stride parameters. Vock teaches measurement means including at least one accelerometer [524] capable outputting signals that can be processed to determine stride parameters.

**Regarding claim 15**, DiBenedetto does not appear to disclose wherein a second shoe comprises a plurality of accelerometers.

However, Vock, a reference in analogous art, teaches wherein a second shoe comprises a plurality of accelerometers (“Additional accelerometers in MMD 524” ¶0302).

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of DiBenedetto and Vock before him or her to modify the second shoe of DiBenedetto to include the plurality of accelerometers of Vock. The motivation for doing so would have been to detect the forward acceleration and speed

of a user using the accelerometer located on a second shoe (Vock: ¶0302) and " to provide improved speed accuracy to runner" (Vock: ¶0302).

**Regarding claim 16**, DiBenedetto discloses the claimed invention except for wherein the second shoe includes a plurality of magnetometers. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the assembly of DiBenedetto having a plurality of magnetometers, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

**Regarding claim 18**, DiBenedetto discloses a device according to claim 17, further comprising portable means for receiving the signal transmitted by the transmission means and for displaying data representative of the signal ("the data can be transmitted (e.g., via radio waves) to a device with a display panel located with the user ... the data can be transmitted to a wristwatch or other device being worn the user" col. 10, lines 54-57).

**Regarding claim 19**, DiBenedetto discloses a device according to claim 18, wherein the portable means comprises:

a data reception means, electronic data processing means for processing data, control input means and display means ("the user may adjust certain characteristics of the shoe by pressing buttons on the wristwatch" col. 10, lines 58-59; "the data can be

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transmitted (e.g., via radio waves) to a device with a display panel located with the user ... the data can be transmitted to a wristwatch or other device being worn the user” col. 10, lines 54-57).

DiBenedetto discloses the claimed invention except for wherein the electronic processing means includes a memory. One of ordinary skill in the art at the time of the invention would have recognized that the wristwatch of DiBenedetto would contain a memory since memories in electronic devices are necessary for the device to function and well know to those in the art.

**Regarding claims 20 and 22**, DiBenedetto discloses a device according to claim 19, where the memory includes:

a sequence to calibrate the signal transmitted by the transmission means, as a function of stride length and magnetic characteristics of the shoes (“In addition, the time of the flight phase (described above) can contribute to the determination of the optimum setting. The stride frequency of the user can be calculated from this variable” col. 13, lines 18-21),

a stride length estimating algorithm that uses a measurement of a variation in magnetic field resulting from movement of the magnetic mass (“The system can be calibrated, such that this magnetic field strength can be converted to a distance” col. 7, lines 66-67),

an algorithm to calibrate the signal transmitted by the transmission means as a function of the parameters input by a user (“The user can set the compression range or

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other performance characteristic target value of the article of footwear 100, by pushing input button 502 to increase the target value or pushing input button 504 to decrease the target value or range” col. 9, line 64 to col. 10, line 1), and

an algorithm to estimate the stride speed (“In turn, stride frequency can be used to determine changes in speed and to differentiate between uphill and downhill motion” col. 13, lines 21-24).

**Regarding claim 21**, DiBenedetto discloses a device according to claim 20, wherein the calibration sequence is designed to determine a mathematical calibration law by polynomial regression, and to determine a direct correspondence between the measured signal and the stride length, for given shoes and a given individual (“The stride frequency of the user can be calculated from this variable” col. 13, lines 19-21; (“In turn, stride frequency can be used to determine changes in speed and to differentiate between uphill and downhill motion” col. 13, lines 21-24).

DiBenedetto discloses the claimed invention, including various calculated variables, except for polynomial regression. One of ordinary skill in the art would find it obvious that a mathematical calibration law by polynomial regression could be used since such mathematical equations or old and well known to those in the art.

### ***Response to Arguments***

Applicant's amendments have overcome the specification objections, 112 second paragraph rejections in the previous Office action.

Applicant's arguments with respect to claims 12-23 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN P. DOUGHERTY whose telephone number is (571)270-5044. The examiner can normally be reached on Monday-Friday, 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sean P. Dougherty/  
Examiner, Art Unit 3736

/Max Hindenburg/  
Supervisory Patent Examiner, Art Unit 3736